

PATENT COOPERATION TREATY


PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 17883.6-D2745-ne | | FOR FURTHER ACTION | | See Form PCT/PEA/416 |
| International application No. PCT/EP2004/009774 | | International filing date (day/month/year) 02.09.2004 | | Priority date (day/month/year) 04.09.2003 |
| International Patent Classification (IPC) or national classification and IPC H04Q7/28 | | | | |
| Applicant T-MOBILE DEUTSCHLAND GMBH et al. | | | | |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 4 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> | | | | |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> | | | | |
| Date of submission of the demand 24.03.2005 | | Date of completion of this report 18.01.2006 | | |
| Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 3918 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 600 01 Fax: +31 70 340 - 3916 | | Authorized Officer Foti, G Telephone No. +31 70 340-3099 | | |



**INTERNATIONAL PRELIMINARY REPORT
 ON PATENTABILITY**

International application No.
 PCT/EP2004/009774

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

| | |
|-------|--|
| 2-8 | as originally filed |
| 1, 1a | received on 04.07.2005 with letter of 01.07.2005 |

Claims, Numbers

| | |
|-----|--|
| 1-6 | received on 04.07.2005 with letter of 01.07.2005 |
|-----|--|

Drawings, Sheets

| | |
|-----|---------------------|
| 1-5 | as originally filed |
|-----|---------------------|

Drawings, Figures

| | |
|-----|---------------------|
| 1-5 | as originally filed |
|-----|---------------------|

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing *(specify)*:
 - ☐ any table(s) related to sequence listing *(specify)*:
 4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing *(specify)*:
 - ☐ any table(s) related to sequence listing *(specify)*:

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|-------|
| Novelty (N) | Yes: Claims | 2,3,4 |
| | No: Claims | 1,5,6 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-6 |
| Industrial applicability (IA) | Yes: Claims | 1-6 |
| | No: Claims | |

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/EP2004/009774

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 5, 6 is not new in the sense of Article 33(2) PCT, for the following reasons:

1.1 Claim 1

Document D1 discloses, in terms of claim 1, (the references in parenthesis applying to this document): a method for operating a push-to-talk communication between a PoC group consisting of at least of one member of a first communication network (Figure 1 - 122), operated by a first network operator, and a PoC-group consisting of at least of one member of a second communication network (Figure 1 - 124); operated by a second network operator, using a PoC application server in each communication network (Figure 1 - 106, 115, 116), comprising the steps of:

- connecting the members of the PoC-group of the first network operator with the members of the PoC-group of the second network operator, by
 - connecting the members of the PoC-group of the first network operator from the side of the second network operator,
 - connecting the members of the PoC-group of the second network operator from the side of the first network operator
- and synchronising the PoC application servers to each other.

(Column 1, Lines 44-47; Column 2, Line 5-16; Column 7, Lines 36-38; Figure 1, Figure 2 - 208, Figure 3 - 308,310)

1.2 Claim 5

The subject-matter of independent claim 5 corresponds in terms of system to the subject-matter of independent claim 1. The objections raised in respect of independent claim 1, therefore, also apply, mutatis mutandis, to independent claim 5.

1.3 Claim 6

The additional features of dependent claim 6 are also disclosed in D1 (Figure 1).

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 2, 3, 4 is not inventive in the sense of Article 33(3) PCT, for the following reasons:

2.1 Claim 2

Document D1 discloses, in terms of claim 2, (the references in parenthesis applying to this document): a method for push-to-talk communication between the members of an existing push-to-talk communication session within a first communication network, operated by a first network operator (Figure 1 - 122), and a group of an additional communication network, operated by a second network operator (Figure 1 - 122), using a PoC application server in each communication network (Figure 1 - 106, 115, 116).

The additional steps contained in independent claim 2, namely:

- *connecting the additional group to each of the existing groups of the session, and*
- *synchronising the PoC application server of the additional group to the previously synchronised PoC application servers, whereby the PoC application server of the additional group is identified by an address derived from the group address*

are either in principle directly derivable from the disclosure of document D1 or, anyway, they are regarded as being merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

2.2 Claims 3, 4

Dependent claims 3, 4 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step because the subject-matter of said claims is regarded as being merely one of several straightforward possibilities from which the skilled person would select, in accordance with

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circumstances, without the exercise of inventive skill, in order to solve the problem posed.

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T-Mobile Deutschland GmbH

01.07.2005

5 Push-to-Talk Interworking

The present invention relates to interworking between separate communication networks using dialled connections and especially to a push-to-talk communication method and system for enabling a subscriber to
10 communicate with one or more subscribers of one or more communication networks without using a dialling procedure.

It is state of the art to use a dialling procedure in digital communication systems to set up a communication path between two subscribers of a
15 communication network or two subscribers of different communication networks.

U.S. patent No. 6 304 558 B1 discloses a network dispatch management system for providing a dispatch service to dispatch clients via a packet-switched network, like the Internet. This also includes a packet-switched
20 communication originating from a wireless communication system.

It is the object of the present invention to propose methods and systems for providing Push-to-Talk services between subscribers of different operators.
25

According to the invention this object is achieved by providing methods and systems as disclosed in the independent claims.

Other features which are considered to be characteristic for the invention are
30 set forth in the appended claims.

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The invention provides solutions for Push-to-Talk services interworking between different network operators, e.g. interworking between Operator 1 and Operator 2. As there is no standard mechanism specified in order to realize the interworking the following technical solution is proposed.

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IAP20 Rec'd PCT/PTO 03 MAR 2006

T-Mobile Deutschland GmbH

01.07.2005

Claims

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1. Method for operating a push-to-talk communication between a PoC-group consisting of at least of one member of a first communication network, operated by a first network operator, and a PoC-group consisting of at least of one member of a second communication network, operated by a second network operator, using a PoC application server in each communication network, comprising the steps of:

- connecting the members of the PoC-group of the first network operator with the members of the PoC-group of the second network operator, by
- connecting the members of the PoC-group of the first network operator from the side of the second network operator,
- connecting the members of the PoC-group of the second network operator from the side of the first network operator, and
- synchronising the PoC application servers to each other.

2. Method for push-to-talk communication between the members of an existing push-to-talk communication session within a first communication network, operated by a first network operator, and a group of an additional communication network, operated by a second network operator, using a PoC application server in each communication network, comprising the steps of:

- connecting the additional group to each of the existing groups of the session, and
- synchronising the PoC application server of the additional group to the previously synchronised PoC application servers, whereby the PoC application server of the additional group is identified by an address derived from the group address.

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3. Method for operating a push-to-talk communication according to claim 1 or 2, characterised in that the synchronisation is carried out automatically by the PoC application servers.

5 4. Method for operating a push-to-talk communication according to claim 1 or 2, characterised in that the synchronisation is carried out whenever a user requests update of all group members of the PoC groups before sending a PoC message.

10 5. System for push-to-talk communication between push-to-talk groups of at least two communication networks, characterised by one common group management system (6) and at least one subsystem for each network operator consisting of at least one Push-to-Talk communication application server (4, 14).

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6. System according to claim 5, characterised in that the communication networks are radio communication networks.

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